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ED NEWSLETTER



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Naval Construction and Engineering at MIT Celebrates 100 Years

By CAPT Raymond S. "Chip" McCord, MIT

The Naval Construction and Engineering Program (XIII-A) at MIT celebrated its 100th anniversary this past April. In attendance at the three day celebration were numerous alumni, both active duty and retired, as well as leaders from the Navy, industry and academia. Keynote speakers at the gala dinner were Chuck Vest, President of MIT and ADM Frank E. "Skip" Bowman, Director of Naval Reactors, and a graduate of the program.

The program began in 1901 when three graduates of the U.S. Naval Academy. Ensigns Ferguson, McEntee, and Spilman, began the course of study of naval ship design at MIT under the direction of Professor William Hovgaard. Hovgaard graduated in 1877 from the Naval Academy in Copenhagen and served in the Danish Royal Navy. As a Lieutenant he was sent to the Royal Naval College in Greenwich, England, in 1883 to study warship construction. One of his classmates there in England was (later) RADM David Taylor. In 1901, as a Captain in the Danish Navy, he came to the United States to continue his study of the submarine and was asked by RADM Taylor and the Secretary of the Navy, John D. Long, to take charge of the new course for Naval Constructors at MIT. Professor Hovgaard re-



Students discuss their projects. Left to right: ADM "Skip" Bowman, Naval Reactors (MIT XIII-A 1973), LCDR Dave Goggins, MIT (MIT XIII-A 2001), CAPT "Deke" Ella, USN (Retired) (MIT XIII-A 1944) and LCDR Michael Malone, MIT (MIT XIII-A 2001).

signed from the Danish Navy as a Captain in 1905 but remained as head of the new course, designated XIII-A, until 1933 when he retired as a professor emeritus.

Course XIII-A is intended for active duty officers in the U.S. Navy, U.S. Coast Guard and foreign Navies who have been designated for specialization in the design, construction, and repair of naval ships. The curriculum prepares students for careers in ship design and construction and is sponsored by Commander, Naval Sea Systems Command. Officers write a thesis directed towards research that supports the needs of

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MESSAGE FROM VADM GEORGE P. NANOS, JR. COMNAVSEA AND SENIOR ED

In the past three years, NAVSEA has been on a journey to unify our organization, refine our mission, and provide America's Fleet "service second to none." In this journey, we identified that one of our paths to achieving improved service was a focus on "effective, timely, affordable integrated product support for the Fleet."

Improving Fleet support has been a primary interest and it has been supported by many other important goals in NAVSEA. In fact, it is the reason NAVSEA and its many commands exist. Our Commander's Forums and other meetings always have revolved around how we can discern the priorities of Fleet commanders, understand their needs, and introduce new technology to answer these concerns. Addressing Fleet priorities and the need to unify NAVSEA commands into a single organization have been the principal concerns for the past three years.

Discussions at our last Commander's Forum reaffirmed and expanded our earlier actions to improve, sustain, and create high-quality, integrated support products and services. Many initiatives are aimed at these goals. The methods for achieving them are to determine any needs for organizational alignment and to identify measurable operational processes to validate needed changes.

One thing is clear—these goals can be fulfilled if NAV-



SEA chooses to show a "single" face

to our Fleet customers in their areas of concentration. We must work carefully to communicate to the Fleet, by our words and our actions, our commitment to them and demonstrate that we are talking to and working with each other concerning Fleet problems and issues. By unifying our communication efforts and actions, we ensure that we are sharing information about discussions and proposals with our customers, while increasing our customers' comfort level that we are taking action. If they detect a fractured organization or disconnected planning, our "single" NAVSEA persona in Fleet concentrations will dissolve. We will lose "face" and credibility with our customers.

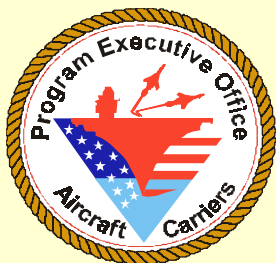
Admiral Clark clearly recognizes this need for unity and alignment in the Navy. That is why it is among his top priorities

as CNO. NAVSEA's vision to establish and operate a unified corporation that provides the world's best technical, acquisition, and life-cycle support leadership directly supports the CNO's top five priorities. Yet the realization of this vision presents challenges on many levels.

The complexity and breadth of NAVSEA's missions have spawned a large, diverse array of commands. In this post-Cold War era, there is a need to simplify and clarify what NAVSEA is doing. Any confusion injected into our organization and its actions is magnified to our customers, even for simple interactions. A "single" face to the Fleet, which delivers integrated product support would attack that confusion, improve communication with our customers, and bolster NAVSEA team interaction.

The recent trend of a declining Navy Total Obligational Authority (TOA) has been determined as insufficient to maintain the industrial base required to sustain a capable warfighting Navy. Also, the operational, maintenance, and logistics requirements of the "in-service Fleet" are growing. The budget impact is significant for these requirements, but also affects the ability to build new ships and systems. These conditions underscore a need to change how the Navy acquires and maintains ships for the Fleet.

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MESSAGE FROM RADM ROLAND B. KNAPP PEO FOR AIRCRAFT CARRIERS

Greetings to my fellow Engineering Duty Officers. As I write this article, I am excited by both the opportunities ahead and the challenges facing our community as we pave the way ahead for technology insertion and engineering innovation while working to sustain America's Navy as the best in the world.

Aircraft Carrier Programs "hit the ground running" in 2001 with the signing of the CVN 77 construction contract. Newport News Shipbuilding, teamed with Lockheed Martin as the ship's Warfare System Integrator, will design and build a completely new Integrated Warfare System that will serve as the cornerstone for this first ship in a series of three that lead, via an Evolutionary Acquisition Strategy, to CVNX, the aircraft carrier for the 21st Century. In March, we were honored to have Mrs. Nancy Reagan serve as the ship's sponsor for CVN-76 during the ship's christening as *Ronald Reagan*. Also attending the christening were Secretary of Defense Rumsfeld and President Bush, as well as several Members of Congress and many other distinguished visitors from both government and industry. In June we completed the first *Nimitz* class refueling complex overhaul (RCOH), with *USS Nimitz* scheduled to commence sea trials on 25 June. The second ship, *USS Dwight D. Eisenhower*, is under contract



and RCOH work has commenced.

In early March, the leadership in PEO Aircraft Carriers set out to clearly define our future by refining our Strategic Plan and Business Strategy. The Strategic Plan and Business Strategy was briefed to "all hands" on the PEO Aircraft Carriers team and industry experts from our "Board of Advisors". The Strategy and Business Plan focus on four key areas: development of a professional, highly trained and motivated workforce; improving customer and stakeholder alignment and satisfaction; improving business practices through integration of "best practices" and e-business tools; and improving both financial and business performance in each of our Programs. We believe that by setting challenging but achievable goals in each of these areas that we can continuously improve

our processes and products as we work to establish PEO Carriers as a "world class" PEO.

PEO Carriers completed a challenging move to the new Washington Navy Yard facilities in May. The PEO Carriers Team completed the move smoothly with no observable external impact on our Fleet customers. We are now well established in our new facilities, and I think I speak for the entire Team in saying that the new facilities are an improvement over those we left behind in Crystal City.

A significant portion of our efforts in overseeing both the In-Service and Future Aircraft Carrier Programs is sustaining consistent and adequate funding. Key to this effort is our aggressive Marketing Campaign, designed to inform and positively influence the lawmakers that appropriate and authorize program funding. Each year PEO Carriers conducts briefings for key congressional staffers in support of the Congressional "budget season". The on-going Quadrennial Review (QDR) this year has increased the importance of these efforts, and PEO Carriers has worked extensively with both the QDR Office and the OPNAV resource sponsors to ensure we are "speaking with one voice" in promoting the Aircraft Carrier as an enduring centerpiece for forward presence and power projection.

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**MESSAGE FROM
RADM KATHLEEN K. PAIGE
ASN(RDA) CHIEF ENGINEER AND
DIRECTOR FOR TAMD AND SYSTEMS
ENGINEERING (PEO TSC-T)**

“I couldn’t think of a better place to be or a better job to have. This is the best I could imagine. I’m doing cutting edge weapons work for the Navy.”

These are the sentiments of CDR Brian Gannon on his job as the Aegis Leap Intercept (ALI) project officer, in the Navy Theater Wide (NTW) Ballistic Missile Defense (PMS 452) Program, of the Program Executive Office Theater Surface Combatants (PEO TSC). ALI is a series of flight tests leading to the intercept of a theater ballistic missile target in the exoatmosphere. The main objective is to prove the advanced technologies and system capability to hit a target in space before the NTW Program proceeds to full-scale engineering development.

CDR Gannon’s responsibility in ALI is to manage overall project execution, including mission requirements, system development and flight tests, to ensure success. He encapsulates his job as being “making sure all the people, pieces and parts align together so that the system hits the target.” “It’s extremely challenging and incredibly rewarding,” he adds.

For him, holding such a position in the Navy offers him opportunities he would not be able to find elsewhere. CDR Gannon explains, “I wouldn’t be doing this if I had not gone Engineering Duty (ED),” he says. He



adds, “I couldn’t think of a better thing to do for my country.”

CDR Gannon, a 1985 graduate of the Illinois Institute of Technology NROTC Program, became interested in ED while instructing at the Surface Warfare Officer’s School in Coronado, CA. “I wasn’t sure where I wanted to go in the Navy, or even if I wanted to stay in the Navy” he says, “The ED community offered the greatest opportunity for me to grow professionally and help enhance Fleet warfighting capabilities.” The first action the ED community took was to send him to the Naval Postgraduate School (NPS), Monterey, CA for a Masters Degree in Astronautical Engineering. CDR Gannon came to Monterey after a tour of duty aboard USS GARY (FFG-51) and two tours at the Surface Warfare Officers’

School, Coronado. The first Coronado tour was as a student, the second as a combat systems instructor in the Division Officer Course. “I’ve always enjoyed being in the Navy, and a friend of mine had gone ED and...well... he put on a full-court press for me to go ED. In the ED community, I saw a chance to make a difference and a contribution,” he says.

From NPS, CDR Gannon headed to the Naval Surface Warfare Center in Port Hueneme, CA. “I needed some time at a field activity, working closely with the Fleet.” CDR Gannon says. He worked in the Aegis department in various testing events, including the Cooperative Engagement Capability (CEC) and Theater Ballistic Missile Defense (TBMD). “I actually was away from home more than when I was stationed aboard ship,” he adds.

Following a four-year stint at Port Hueneme, CDR Gannon came to Washington, D.C. and the PEO. “I was nearing my rotation date and had been looking for a job to go to next. A friend took me to a dinner with some of the senior leadership in the PEO, and they did a good job selling ALI,” says CDR Gannon. “I thought it would be great to be involved in the development of advanced weapons for the Navy,” he says, “like I said, it’s cutting-edge and rewarding.”

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MESSAGE FROM RADM WILLIAM R. KLEMM CINCPACFLT (N43)

The last six months have seen the Nation focus attention on the Pacific Fleet. The *USS Greeneville* collision with the Fishing Vessel *Ehime Maru* and the EP3 collision with the Chinese F8 have achieved household recognition. If one bores down into the aftermath of these international incidents, you will find the PACFLT N43 Maintenance Shop at the heart of the recovery efforts. As Ship Maintenance Officers, many folks are surprised to find Engineering Duty Officers (EDOs) engaged in aircraft maintenance. At the senior levels, we are not only involved but have responsibility for Intermediate Maintenance across the theater. The EP3 recovery is being managed by Aviation Maintenance Duty Officers (AMDOs) who work for EDs in Fleet Maintenance positions.

More closely aligned to our traditional ship responsibilities is the *Ehime Maru* crew-member recovery effort.

On February 9, 2001, the *USS Greeneville* collided with the *Ehime Maru*, a Japanese Fisheries High School train-



ing vessel, while off of the coast of Oahu, Hawaii. Regrettably, despite an extensive air, sea and undersea search, nine of the crew have never been located and some are presumed to be entombed inside the *Ehime Maru* in approximately 2,000 ft. of water.

International Political and Military relationships depended upon the Navy's response to this tragedy. After an initial feasibility study headed by EDs, the Fleet Commander made the decision to entrust this responsibility to his N43 engineers. Our expertise in the engineering aspect of our jobs is a given, but just as importantly, our experience in other disciplines such as interna-

tional relationships throughout the Pacific (see Figure 1), project management, environmental compliance and contracting made us the community of choice as the integrators of complex projects such as the recovery of the *Ehime Maru*.

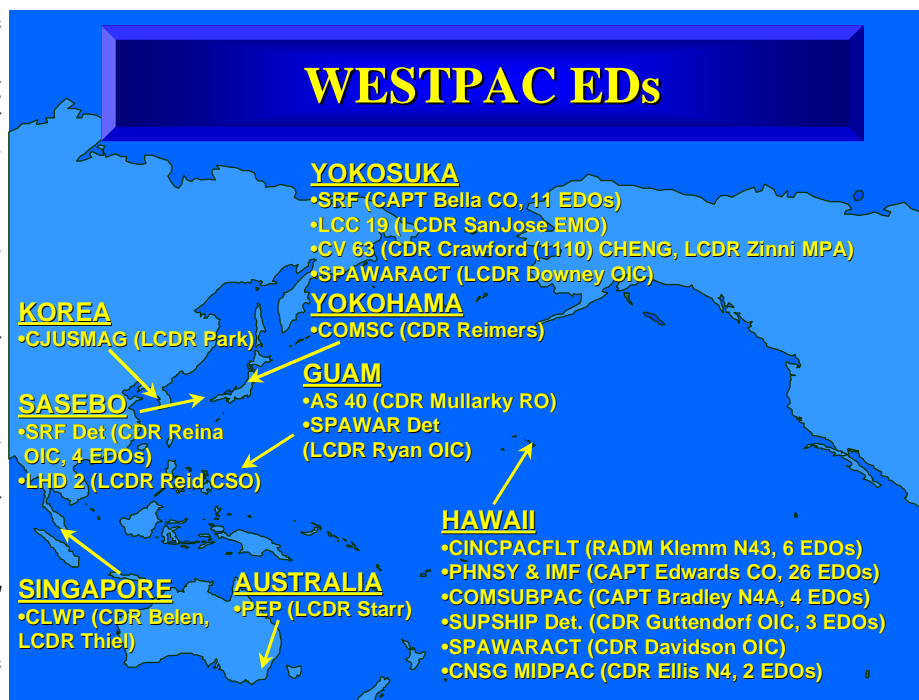


Figure 1. Pacific Fleet EDs assigned to our various WESTPAC billets gain valuable experience in International Relations.

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FY-02 ED Flag Selections

Captain John D. Butler was commissioned in 1974 following graduation from Officer Candidate School. He graduated in 1974 from the University of Texas at Austin with a Bachelor of Science Degree in Chemistry. He holds a Master of Science Degree in Acoustic Engineering from Naval Postgraduate School. Captain Butler's sea assignment have been onboard *USS Will Rogers* (SSBN 659) as Assistant Weapons Officer; *USS James K. Polk* (SSBN 645) as Navigator/Operations Officer; *USS James Madison* (SBN 627) as Navigator/Operations Officer; and *USS Proteus* (AS 19) as Repair Officer.

Captain Butler's shore assign-



ments include Attack Submarine Training Head for the Deputy Chief of Naval Operations (Submarine Warfare); AN/BSY-1 Submarine Combat and Acoustic System (PMS 417) Chief Engineer for Program Executive

Officer, Submarine Combat and Weapons Systems; SEAWOLF Class Submarine (PMS 350) Assistant Program Manager (Design and Construction) for Program Executive Officer, Submarines; and Strategic and Attack Submarines (PMS 392) Program Manager. In September 1998, he reported to his current assignment as the Executive Assistant and Naval Aide to the Assistant Secretary of the Navy (Research, Development and Acquisition).

Captain Butler's awards include the Legion of Merit, Meritorious Service Medal (three awards), Navy Commendation Medal, and Navy Achievement Medal.

Captain Jeffrey A. Brooks began his military career by enlisting in the U.S. Navy in 1970. His enlisted assignments included serving onboard *USS Paul Revere* (LPA 248) and as a nuclear plant instructor at the Naval Nuclear Power Training Unit in Idaho Falls, ID. In December 1976, he received his commission and a Bachelor of Science degree in Electrical Engineering from the University of Missouri via the Navy Enlisted Scientific Education Program (NESEP). He holds a Master of Science Degree in Nuclear Engineering from Pennsylvania State University.

Captain Brooks' commissioned sea assignments have been onboard *USS Point Defiance* (LSD 31) as Deck Officer, Engineering Officer, and Regular Overhaul (ROH) Coordinator;



and *USS Cape Cod* (AD 43) as Repair Officer.

Captain Brooks' commissioned shore assignments include Naval Ship Repair Facility, Subic Bay, RP as Ship Superintendent and Assistant Repair Officer; Charleston Naval Shipyard as Ship Superintendent and Type

Desk Officer; Staff of Commander, Naval Surface Force, U.S. Pacific Fleet as Force Engineering Officer; Readiness Support Group, San Diego as Maintenance Officer; Shore Intermediate Maintenance Activity, Long Beach as Commanding Officer; SUPSHIP Portsmouth as Repair Officer; SUPSHIP Newport News as Deputy; and Naval Sea Systems Command as Director of the Supervisor of Shipbuilding Management Group (SEA 04X1). In May 1999, he reported to his current assignment as Commanding Officer of SUPSHIP Newport News.

Captain Brooks' awards include Legion of Merit, Meritorious Service Medal (five awards), Navy Commendation Medal (two awards) and Navy Achievement Medal (two awards).



*Rear Admiral John A. Gauss, USN
Commander*

*Space and Naval Warfare System Command
Retired 1 July 2001*

Rear Admiral John A. Gauss, USN, is the former Commander of the Space and Naval Warfare Systems Command. In this assignment, he directed the development, acquisition, and life cycle management of command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) systems for the U.S. Navy, selected Marine Corps and joint service programs.

RADM Gauss assumed command of Space and Naval Warfare Command March 20, 1998. He relinquished command May 25, 2001 at his retirement from naval service.

Born in Salem, Massachusetts, RADM Gauss attended public schools in his hometown. From 1965 to 1969 he attended Cornell University, where he graduated with a Bachelor of Science degree in Engineering Physics and was commissioned through the Navy Reserve Officer's Training Corps Program in July 1969.

Following his commissioning, RADM Gauss completed seven years of continuous sea

duty, including duty as the Electronics Material Officer, Combat Information Center (CIC) Officer, and Operations Officer in *USS Patterson (FF 1061)*; Operations Officer in *USS Flint (AE 32)*; and Executive Officer in *USS Conserver (ARS 39)*. During this period RADM Gauss qualified as a Surface Warfare Officer.

In 1976, RADM Gauss entered the Naval Postgraduate School where he earned both Master and Doctor of Philosophy degrees in Electronics Engineering with a minor in Computer Science. During his tour at the Naval Postgraduate School, RADM Gauss transferred to the Restricted Line as an Engineering Duty Officer. After graduation, RADM Gauss served as the Airborne Anti-Submarine Warfare (ASW) Project Officer at the Naval Surface Warfare Center, White Oak, Maryland; as the Tomahawk Surface Ship Weapons System Chief Engineer at the Cruise Missiles Project, Washington, D.C.; and as Major Program Manager, Navy Command and Control Systems-Afloat (NCCS-A) at the Space and Naval Warfare Systems Command (SPAWAR), Washington, D.C.

In October 1992, RADM Gauss was assigned as the Program Director/Major Program Manager, Command Systems (PD 60) at SPAWAR. He oversaw Navy Command and Control Systems (both afloat and

ashore), Navy Electronic Combat Surveillance Systems, Shipboard Combat Support Information Management Systems, Environmental Systems, Fleet Marine Force Air Traffic Control Systems.

In August 1994, RADM Gauss was assigned as the Commander, Joint Interoperability and Engineering Organization and the Deputy Director for Engineering and Interoperability (D6) of the Defense Information Systems Agency in Arlington, Virginia. While there, he was responsible for all aspects of engineering, providing effective, interoperable, integrated and affordable DOD command, control, communication, computer and intelligence (C4I) and combat support information systems for the joint warfighter.

In August 1997, RADM Gauss became the Director, Allied and Fleet Requirements Division (N60) for the Space, Information Warfare Command and Control Directorate (N6) of the Navy staff, headquartered in Washington, D.C.

During his career, RADM Gauss completed deployments to Northern Europe and multiple deployments to the Western Pacific. His personal awards include the Defense Distinguished Service Medal, Legion of Merit (three awards), Meritorious Service Medal and Navy Achievement Medal.

Notes From the ED Detailer

By CDR Tim Atkinson, NAVPERSCOM (PERS-445)

Wow, what a ride! Where has the time gone? Seems like I just made the PCS journey to Graceland. Having been in this seat for two years, I want to take this opportunity to drop y'all several "groups" as I depart the pattern.

A hearty welcome aboard to CAPT Robin Hiddemen and CDR(S) John Armantrout to the detailer shop. CAPT Hiddemen is a NavArch coming from PEO EXW PMS 325 and will be the Senior Detailer & Community Manager. John is a combat systems engineer coming from SPAWAR PMW 159 and will detail CDR and below (1440) officers. I know you will extend the high level of support to them that LCDR Dave Kohnke, Richard Todd, and I have grown accustomed. With Patsy and Ida in DC and the detailers in Memphis, we have the finest detailing and career management team in the Navy. My gracious thanks to them all.

I'm sure those of you with CY 02 PRDs are busy exploring job options. I encourage the review of RADM Yount's and RADM (S) Sullivan's articles in the Apr 01 "Newsletter." If you want to get buffed-up on the assignment slating process, give us a buzz. Communicate your job preferences and see what factors need to be considered. Since the detailer shop starts formulating the slate in the Fall, I suggest you open the "comm-pipes" in Aug-Sep.

It has truly been an honor and a privilege to have been your detailer-without a doubt, the best job I've had in the Navy. I wish I could play a recording for you of



Newly reporting ED detailers: (left to right) CAPT Robin Hiddemen and CDR(S) John Armantrout.

the new lateral transfers...hearing the excitement and joy in their voices after receiving the news of being accepted into the community... or the total disbelief when hearing that the ED leadership personally mentors and provides an environment to succeed. I could go on and on, but suffice it to say you all have made me feel like the "candy man." Our community offers and delivers so much! I have been totally humbled from this vantage, and since this is a team effort, you all can stand tall and proud. Although I'm leaving the detailer shop, I'll always make time to chat. If I can be of assistance, please look me up. Thank you and my warmest regards, ship-mates.

I leave you with a challenge. If you've been buried on a project or haven't heard, we need more lateral transfers. Please make recruiting part of your daily routine. I challenge you to recruit one new ED every year. Think about it- just one. This

will require very little effort on your part. If we all got one a year, envision the impact.

PERS-445 DIRECTORY

Pers-445, Branch Head
CAPT Robin Hiddemen
(901) 874-4090
P445@persnet.navy.mil

Pers-445B
CDR(S) John Armantrout
(901) 874-3994
P445B@persnet.navy.mil

Pers-445D
LCDR Dave Kohnke
(901) 874-3085
P445D@persnet.navy.mil

Pers-445F
Mr. Richard Todd
(901) 874-3294
P445F@persnet.navy.mil

FAX: (901) 874-2677
DSN PREFIX: 882-XXXX

The Making of a Submarine Project Superintendent at Norfolk Naval Shipyard

By LCDR Steven M. DeWitt, Norfolk Naval Shipyard

Reporting to a new command it is always best to hit the deckplates running. For LCDR Brian Murphy the pace is more like an all out sprint. A highly trained former nuclear submarine officer and recent MIT graduate, he reported to Norfolk Naval Shipyard (NNSY) in March 2001 to complete his first Engineering Duty (ED) Officer tour. Recognizing his potential, the Operations Officer, CAPT Jim Roger, has designated him as the Project Superintendent for the *USS Hampton* (SSN 767) FY02 Drydocking Selected Restricted Availability (DSRA) scheduled to begin in January 2002.

Though a junior ED, LCDR Murphy's prior naval experience is significant. He gained a solid background of the 688 class SSNs during his tour as an Engineering Laboratory Technician (ELT) aboard the *USS Bremerton* (SSN-698). Additionally his assignments as MPA while decommissioning the *USS George Washington Carver* (SSBN-656) at Puget Sound Naval Shipyard, as Shift Engineer/Ops Officer at the D1G Prototype, and as DCA/SY Liaison for the construction of the *USS Louisiana* (SSBN-743) at Electric Boat Corporation, gained him invaluable experiences in industrial environments interacting with civilian personnel. He recognizes that the key to his future success is to master the business, communication and production processes in place at NNSY. He has already gained shipyard experience while assisting the *USS Boise* (SSN-764) project team in completing the DSRA, which included a major hull casting

job.

To fully prepare for this daunting task, LCDR Murphy has been assigned as the Assistant Project Superintendent for the *USS Montpelier* DSRA, under the wing of the Project Superintendent, CDR(S) Al Clark. CDR(S) Clark has significant experience as a Project Superintendent, Zone Manager and APS for submarine availabilities having completed his initial ED tour at Portsmouth Naval Shipyard. He has exceptionally detailed knowledge of the 688 class submarine, which was further honed during his previous tour as an INSURV Team member. He knows very well the demanding work environment and tight schedules of a DSRA. He describes a DSRA as 'controlled chaos'. Fortunately for LCDR Murphy, CDR(S) Clark never hesitates to answer questions and to mentor the junior EDs at NNSY. He always leads by example.

The DSRA is the most critical of all submarine availabilities. Typically, the work package requires completing 20,000 mandays of work in a nominal 60 day time period. Approximately 45 days are spent in the drydock performing inspections and repairs that enable the ship to maintain its certification for unrestricted operations. The Type Commander cannot afford to allow the availability schedule to slip as the submarine must be returned to the fleet to meet operational requirements. There is no room for error. Any delay in completing a specific task can potentially affect the ability to complete the availability on schedule. A well-integrated

schedule and a highly trained and motivated work force led by the project management team are essential. In the end the entire availability will cost approximately \$15 million. This is clearly a big job for a junior ED!

The *Hampton* DSRA is a particular challenge. The DSRA is scheduled during a peak workload at NNSY, and the highly skilled submarine qualified mechanics and electricians at NNSY are stretched beyond their capacity. If the other public yards do not have resources to support, NNSY will contract out a significant portion of the work package to our corporate partners in submarine maintenance at Newport News Shipbuilding and Electric Boat Corporation. The working relationships that NNSY has developed with these private organizations are critical elements of successful submarine maintenance at NNSY.

The Project Superintendent is responsible for the entire availability performance with respect to cost, schedule, and quality. A complicated task considering all the different organizations performing maintenance. Will LCDR Murphy be fully prepared? Will his experiences as an assistant on the *Montpelier* DSRA gain him the insight he needs to foresee all the potential problems that exist so that he can develop strategies to minimize the risk to the successful completion of this project? Considering the strength of the ED mentoring program in place at NNSY, his chances are good.

Engineering Duty Officers in Action on the Type Commander Staff

By COMNAVSURFLANT N43 Maintenance and Materials Staff

Another area where Engineering Duty (ED) Officers provide invaluable service is on the Type Commander's (TYCOM) staff. Here at COMNAVSURFLANT we have positions in both the Material and C4I/Combat Systems Directorates. The "top-notch" individuals filling these positions are providing direct liaison with the surface force on a daily basis.

From the Material Directorate, the Type Desk officers interact constantly with Port Engineers, Planning Yard representatives, System Commands, Ship Availability Planning and Engineering Centers (SHAPECs), Naval Supervising Activities, other Staff representatives, and the ships themselves, in order to ensure the plans are in place to provide the proper maintenance support to the fleet. Ranging from long term alteration planning, providing the funding in order to execute CNO availabilities, to the status of Casualty Reports (CASREPs), the Ship Type Desk Officers (TDOs) are involved in all aspects of their assigned ship class maintenance plans.



Also within the Material Directorate, is the Maintenance Requirements/Plans and Policies Division. These individuals are involved in the workings of the Navy Maintenance financial plans. In these days of heightened fiscal constraints, these positions have become more and more critical. Whether providing funding for a prior year requirement which increased its return cost, executing the current year budget, providing the input for future year budget, or working side by side with the OPNAV resource sponsors to produce the Baseline Assessment Memorandum (BAM), there is always something going on in the budget arena. Identification of a

credible maintenance requirement has come to the forefront of numerous budget discussions. This division has a direct input into the Maintenance Requirements System Alliance through the Fleet Commander. Many of the other current initiatives, such as the VCNO's tasking to review Navy Maintenance "Task Force M", the VCNO's review of the Fleet Modernization Program process, and the Fleet Maintenance Officer review of the Fleet Technical Support Centers directly involve this Division. CNSL also has an initiative called SURFLANT Proactive Maintenance. This group, which pulls in subject matter experts from numerous other organizations, reviews selected maintenance processes and their costs, such as ship dry-docking and tank maintenance, in order to verify that our resources are being expended in the most efficient manner.

As you can see, being a member of the TYCOM staff will involve you in every major issue currently on the plate for NAVY maintenance.

Maine Shipyard Comes To a Parting With the Ways

The Washington Post, June 23, 2001

BATH, Maine – A champagne bottle will clang against the bow, streamers and patriotic music will fill the air, and a century-old shipyard tradition will end today at Bath Iron Works.

The Mason, A Navy destroyer, will be the last ship launched down an inclined path at the Bath shipyard. Future ships will be built on a flat surface, helping to shave weeks off the production schedule and making the yard more competitive. Instead the sliding into the Kennebec River, which takes about 30 seconds, new warships will be transferred to a drydock, which will be filled with water, allowing the ship to float away.

Phased Testing Approach on USS San Antonio (LPD 17) To Benefit the Fleet

By CDR(S) George Sutton and LCDR Steve Debus, SUPSHIP New Orleans

SUPSHIP NEW ORLEANS: Early results indicate that a new test approach will provide great benefits to the fleet. SUPSHIP New Orleans and the LPD 17 program are using a phased testing approach for the Navy's newest amphibious ship. The key benefit is that problems are identified early in the test program and not later during the production phase of ship construction. The problems are corrected in a lab environment instead of onboard ship at construction sites at Avondale, Louisiana and Bath, Maine.

The test philosophy uses a stepping stone approach. Initially, individual components of the ship's systems are tested alone, just as they have been in the past. Upon completion of the component level testing, systems are assembled and tested in a lab with its interfaces to external systems simulated. Upon successful completion of those tests, the systems are linked together with actual external systems and equipment in functional groupings (e.g. nav inputs, C4I, etc.). These groups of equipment are typically colocated in a common lab but may also utilize a nationwide computer network established by TEAM 17 to facilitate distributed testing. The network connects several test labs across the country using switching gear at the end points identical to what will go on the ship as part of the Shipboard Wide Area Network (SWAN). The last phase of the stepping stone testing involves full use of the distributed test network and links the various

sub-groups into a full up ship integration test. This allows test engineers to validate that system integration efforts were successful without having to assemble all of the equipment at one location.

The SWAN itself is considered to be an LPD 17 system and is undergoing its own system level tests. The SWAN recently completed factory acceptance testing and external interface testing using the actual ship set equipment to be delivered to the LPD 17. This testing examined the redundancy and failover features of the SWAN, tested all of the basic interfaces and services and also included an "early look" by the ship's security accreditation agent into the security settings used on the SWAN. Because of this, LCDR Steve Debus of SUPSHIP New Orleans, believes that his system will provide a robust, reliable and fully tested network transport vehicle for all other systems on the LPD 17 class ships.

The SWAN is truly the "data backbone" for all other electronic systems aboard the LPD 17. One of the many systems that uses the SWAN extensively is the Ship Control System (SCS). The SCS is an outgrowth of the systems currently in use



Pictured in the lab at the LPD 17 COE in Avondale are from left to right: CDR(S) George Sutton, PMS 317 Test Director Mr. Bob Magrath, CDR Jim Coumes and LCDR Steve Debus.

with the SMARTSHIP Programs. It is a sophisticated system of hardware and software designed to interact across the SWAN to produce speed and heading commands that control the position of the ship's rudders and the speed and pitch of the ship's propellers. This "fly-by-wire" system is also integrated with ship's navigational system and will utilize Digital Nautical Charts to allow for more precise and less manpower intensive navigation of the ship.

The SCS has seen "the payback" of this new test approach as well. System interface problems were found in the lab during factory testing. Those problems have been corrected early, saving valuable re-design and equipment rework/shipping time.

*See **Phased Testing on LPD 17**, page 19*

Engineering Duty Aboard USS Zumwalt – the DD 21 Land Attack Destroyer Program

By CDR(S) Charles A. Davis, PEO Surface Strike (PMS 500TO2)

The Navy is sailing into the 21st century with the *Zumwalt* class of DD 21 Land Attack Destroyers and Engineering Duty (ED) Officers are helping to chart the course.

DD 21 will achieve a revolution in the Surface Navy community. The DD 21 ship class will bring unprecedented capability to decisively influence events ashore through credible and far-reaching Land Attack power. The DD 21 program is revolutionizing the way ships are built and manned, with aggressive goals for reduced crew size, survivability, signatures, acquisition cost, and operating costs.

DD 21 is also revolutionizing acquisition and support strategies. The DD 21 program achieved Milestone I in 1998 and is just completing a three-year design competition between two Industry teams. In this competition, the two Industry teams are going well beyond the typical government-defined specifications. Starting with the DD 21 Operational Requirements Docu-

ment, competing teams have derived their own Performance Specification as part of their competitive bid. Industry is expected to leverage its best practices and technical expertise, hiring government technical resources as needed, to achieve revolutionary yet affordable capability through best value engineering. This extends not only to ship design and construction, but also to the total life cycle support of the DD 21 ship system.

EDs in the DD 21 program have multiple roles. They bring operational perspectives to the refinement of DD 21 engineering designs, contribute technical knowledge, facilitate liaison with other Navy/DoD programs, and apply acquisition expertise and experience in managing contract cost, schedule, and performance.

Currently nine EDs are assigned to PMS 500, the DD 21 Program Office under PEO Surface Strike. CAPT Chuck Goddard, the senior DD 21, an ED, relieved RADM(S) Tom Bush as the DD 21 Program Manager on

22 June 2001. The DD 21 Program Manager (PM) leads the entire multi-billion dollar ACAT-1D program. The PM's efforts span the entire acquisition arena, from addressing Congressional inquiries, to working DoD and OPNAV sponsor issues, to managing the Government-Industry Team approach for design, construction and life cycle support.

The DD 21 Total Ship Engineer (TSE) is an O-6 ED billet. CAPT(S) Charlie Behrle is the current TSE. He was preceded by CAPT Jim Wilkins, now PMS 377. The technical TSE duties are focused on system engineering, various technologies, functions, and capabilities within a single, integrated total ship system. The TSE is in charge of the total ship design, the combat systems, the C3ISR systems, the aviation design, the total ship computing environment, software integration and certification, and human systems integration.

See *DD 21 Program*, page 20



DD 21 EDs: (left photo) LCDR Tom Tomaiko, (center photo left to right): LCDR Ivan Pierce (SPAWAR REP), LCDR Mary Beth Chipkevich, CAPT Chuck Goddard, CDR(S) Charles Davis, CAPT(S) Charlie Behrle, CDR Reid Davis, CDR Pete Nardi, (right photo) CDR Rich Blank. (U.S. Navy Photos)

PMS 470 – Solving Today's Expeditionary Warfare Problems!

By CAPT Rick White, PEO Expeditionary Warfare (Program Manager, PMS 470)

Do you want to get back to working directly with the Fleet solving waterfront problems today? Or tackling complex integration problems associated with installation of new weapons, HM&E, and C4I systems on in-service ships? Then PMS 470 is the right place to enhance your Engineering Duty Officer career. PMS 470, the Expeditionary Warfare Life Cycle Support Program Management Office (within PEO EXW) is charged with providing life cycle management and modernization for all in-service amphibious assault, command and auxiliary ships and in-service and leased dry docks for the United States Navy. PMS 470 interfaces with the Fleet and other SYSCOMS via the following five divisions:

Operational Cycle Division supervises the execution of all CNO availabilities for 470 ships. We are the availability gatekeeper responsible for managing Planning Yard support of availabilities, ensuring all AITs are identified and integrated into work packages, and coordinating the resolution of schedule, funding, technical or logistical issues through availability completion.

Fleet Readiness Division supports near and long-term fleet readiness of PEO EXW in-service ships. Duties include product line management, action response, Expeditionary Homeport Engineering Team (EHET) management, management of the battle force D-30 process, and liaison with programs/agencies for total ship integration.

Technical Division's purpose is to provide technical direction and guidance to ISEA's, planning yards and installing activi-

ties; manage the development, approval, and tracking processes for all JCFs and SARs effecting PMS 470 ships; and to research, develop and approve solutions to Fleet shipalt requests.

Logistic Division provides the amphibious, command, and auxiliary ships with timely logistics and technical information necessary to support newly installed systems and equipment and resolves Fleet identified logistics issues.

Procurement Division ensures that the financial and business processes are in place and executed to provide support for and respond to the Fleet's life cycle requirements for in-service Expeditionary Warfare ships.

Current high visibility Life Cycle Support Programs that PMS 470 is taking the lead on include:

- **Fleet Modernization Program (FMP)** – the FMP provides ship system and/or equipment upgrades or replacements to offset threats, comply with environmental regs/laws, provide safety improvements, improve reliability, and reduce ownership cost. PMS 470 serves as the central technical authority; coordinates, plans and accomplishes ship alterations; and integrates ship systems and capability improvements for 57 ships over 14 ship classes. PMS 470 has over 66 CNO availabilities in planning over the next 2 years.

- **Expeditionary Homeport Engineering Team (EHET)** – es-



tablished to provide both increased focus and direct support to the fleet on the waterfront.

- **LHA Midlife Sustainability Program** – The TARAWA LHA class ships are now past the midpoint of their notional 35-year service life. This factor, coupled with the increased operational requirements, including utilization as flag ships for deploying Amphibious Readiness Groups, has heightened the requirement for a midlife upgrade. PMS 470 is conducting the Midlife Maintenance Upgrade program to overcome the maintenance backlog and restore the LHA class ships to the originally configured baseline.

- **Life Cycle Engineering and Integration (LCE&I)** – an initiative intended to provide more comprehensive systems engineering throughout ships' in service life cycles. As a first step, design studies are underway to baseline and establish greater topside configuration control. This effort will eventually be expanded to below deck systems and toward a more total ship perspective.

See *Solving Problems*, page 20

Where the Fleet Begins

By Jim Scott, NSWCD Carderock Public Affairs Director

The Carderock Division of the Naval Surface Warfare Center (NSWCCD) is the Navy's center of excellence for ships and ship systems. More specifically, this is the hull, mechanical, and electrical (HM&E) aspects of ships and ship systems integration. With unique laboratories and test facilities, large-scale land-based engineering and test sites, and at-sea measurement facilities throughout the United States, Carderock Division has been at the forefront of technologies vital to the success of the Navy and the maritime industry for more than a century.

The key element in the technological success of the Division is its breadth and depth. As a major component of the Naval Sea Systems Command it provides cradle-to-grave support for its technical products over an enormous range of scientific areas related to surface and under-sea platforms. The Division addresses the full spectrum of applied maritime science and technology, from the theoretical and conceptual beginnings, through design and acquisition, to implementation and follow-on engineering. This includes all technical aspects of improving the

performance of ships, submarines, military watercraft, and unmanned vehicles, as well as research for military logistics systems. In addition, the Division is uniquely chartered by Congress to support America's maritime industry.

Carderock Division provides unique and hands-on opportunities for Engineering Duty officers (EDs). CAPT Steven Petri, Division Commander, states, "In its technical leadership, Carderock links technology to applications for the Navy and the maritime industry in ship systems and logistics R&D; hydrodynamics; ship survivability, structures and materials; ship signature; ship machinery R&D; and ship machinery engineering."

According to CAPT Petri, the real opportunities for EDs at the LT/LCDR level focus on technical, management and leadership challenges supporting projects. "At the CAPT/CDR level", he explains, "the duty is similar to the CEO of a business amounting to goal setting, and people management in a technical line of work." Overall, there are nine ED billets at NSWCCD (2-CAPT, 2-CDR, 2-LCDR, and 3-LT).

He goes on to say, "Some of the Division's recent technical accomplishments are quite impressive. They include the advanced enclosed mast / sensor system, stern flaps for surface combatants, HSLA family of steels, advanced degaussing system, zonal electric distribution system, DDG 51 quiet propulsor, SEAWOLF propulsor, ship-board environmental protection systems, advanced seakeeping hull, and submarine machinery silencing."

Today, the Division consists of 3,800 scientists, engineers and support personnel working in more than 40 disciplines ranging from fundamental science to applied in-service engineering. Headquartered in West Bethesda, Maryland, the Division houses world-class facilities and laboratories. A major operating site in Philadelphia is recognized as the center for naval machinery. CAPT Stephen Joseph is the Division Deputy Commander and Commanding Officer of the Ship Systems Engineering Station (NSWCD - SSES) in Philadelphia.

See *Where Fleet Begins* page 21



CAPT Steve Petri (left), discusses propeller technology with former SECNAV Richard Danzig. (Photo courtesy of Pam Lama)



CDR Dave Fox (left), points out the Cutthroat control surface linkage feature to ED Reservist, LCDR Brad Meister. (U.S. Navy Photo)



CAPT Stephen Joseph (left), looks on as RADM William Cobb, presents the Theater Surface Combatant ward for Excellence, to SSES Philadelphia employees. (Photo courtesy of Pam Lama)

U.S. Special Operations Command (The Quiet Professionals)

By CAPT John S. Kamen, PEO (Marine and Rotary Wing)

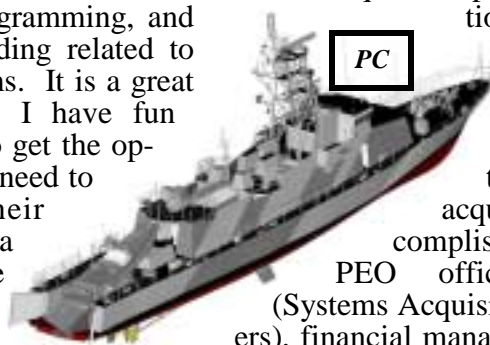
Greetings from Tampa, Florida! The ED community is serving a critical role in the newest unified command in the Department of Defense. The United States Special Operations Command (USSOCOM) was activated April 16, 1987 and is one of nine unified commands in the U.S. military's combatant command structure. USSOCOM consists of 46,000 Navy, Army and Air Force special operations forces (SOF) personnel, active and reserve, that are organized into a variety of land, sea, and aerospace forces. USSOCOM provides highly trained, rapidly deployable and regionally focused SOF personnel in support of global requirements from National Command Authorities and geographic Commanders in Chief.

I am assigned to the Special Operations Acquisition and Logistics Directorate (SOAL) as the Program Executive Officer for Maritime and Rotary Wing Systems (PEO M&R) and am responsible for acquiring and sustaining all SOF peculiar maritime and rotary wing platforms and their associated sub-systems. At the last count I had 68 programs relating to the Navy, Army, and Air Force under my control. Some of these programs include the Advanced SEAL Delivery System (ASDS),

Swimmer Delivery Vehicles (SDV's), Patrol Coastal Ships (PC's), Naval Special Warfare Rigid Inflatable Boats (NSWRIB's), Mk V Patrol Craft, and both Army and Air Force Special Operations helicopters. I am also dual hatted as a Resource Sponsor and deal with all the planning, programming, and budgeting of funding related to all of my programs. It is a great acquisition job! I have fun each day trying to get the operators what they need to accomplish their mission. It is a great challenge and very rewarding!

Within USSOCOM there are two ED billets, the PEO billet and an 05 1440 billet within PEO M&R as the Chief Engineer for the Combatant Craft Program Management Office (CCPMO). CDR (Sel) Pete Newton just reported on-board to fill the CHENG billet.

CCPMO (the PM is a SEAL) was established at USSOCOM in 1993 and it has done an outstanding job focusing on the NSW operator's combatant craft needs and delivering boats in record times. The MK V, NSW 11 Meter RIB, and the newly acquired Special Operations Craft Riverine (SOCR) are all examples of the superior acquisitions accomplished. In the PEO office, SAM's (Systems Acquisition Managers), financial managers, and logistics managers work daily with NAVSEA PMS 395 (Deep Submergence), PMS 325 (Special Programs), the Army (MH-47 D/E Chinooks), MH-60 K/L (Blackhawk) and A/MH-6 (Little Bird), and Air Force MH-53 J/M (Pavelow) helicopter PM's, DoD, and Congress to get the job done. We also deal with ONR and the various DoD research and development arms to field current technology to satisfy the warfighters needs.



PC



ASDS SUBMARINE



NSW RIB



MK V

Aegis Technical Representative - It All Starts Here!

By CDR James M. "Marty" Williams, Jr., Officer in Charge, CSEDS

Aegis Technical Representative is located in Moorestown, New Jersey just 20 minutes east of Philadelphia. While the ambience of Southern New Jersey is small town, the region boasts easy access to large metropolitan shopping areas, sports complexes, museums and historic Philadelphia. The Jersey Shore, Atlantic City Casino's, New York City and the Pocono Mountains of Pennsylvania are within easy reach for weekend excursions.

The majority of active duty Navy personnel are assigned to the Aegis Combat System Engineering Development Site (CSEDS), located about ½ mile from the Lockheed Martin complex. CSEDS, nicknamed the "cornfield cruiser", has the appearance of a land-locked ship conspicuously placed among dairy farms and cornfields in the New Jersey countryside. It is a unique Navy facility that has been in continuous operation supporting development and system integration testing of Aegis Weapon System Upgrades for over 20 years. CSEDS houses



two AN/SPY-1 Radar Arrays which look out over the Atlantic Ocean and Northern Virginia Capes Operating Areas. The radars are operated from two Combat Information Centers located in the building which support full tactical manning for acceptance and operational testing.

Aegis TECHREP has three Engineering Duty (ED) Officers assigned; the Commanding Officer, CAPT Phil Corbett, the OIC of CSEDS, CDR Marty Williams and the Combat System Engineer, LCDR Don Brittain. CAPT Corbett discussing the role of Aegis TECHREP offered:

"Aegis TECHREP is a unique command and a great place to work. Both the Navy on-site technical presence and CSEDS were part of the vision of the RADM Wayne E. Meyer who recognized the need for an investment of our most talented government engineers and Sailors to partner with Lockheed Martin early in the Aegis Weapon System design process to be successful. From an Engineering Duty Officer perspective I have never had an assignment that allowed me to be as involved in engineering issues on a daily basis. CDR Marty Williams is responsible for all aspects of CSEDS operation. CSEDS contains over \$250M of equipment and supports parallel development of both U.S. Navy and Allied Military Sales Aegis Weapon System computer programs.

Marty has also been instrumental in greatly expanding our ability to test interoperability by linking CSEDS with other test facilities and ships. LCDR Don Brittain heads our Navy Review Team.

See *It All Starts Here!* page 20



Aegis Techrep Combat System Engineer, LCDR Don Brittain (center) supports Multi-Element Integration and (MEIT) during AWS Baseline 6 Phase III development.



CSEDS OIC, CDR Marty Williams (left) discusses the recent AWS Baseline 7 Phase I advanced processing suite installation with the Lockheed Martin Site Manager, Mr. Mike Crawford.

Nanos

Continued from page 2

A key element in this effort is to reassess our principal processes and adopt standard or common processes for "in-service" support throughout NAVSEA, wherever possible. This will reduce complexity for the Fleet, while promoting a "single NAVSEA." But it will also maximize use of the best processes, advance personnel growth and contributions, and create a greater synergy within NAVSEA.

Also, NAVSEA policy provides for a clear line of technical authority. However, there is a need to assign and publicize these specific technical standards and engineering tools along the lines of technical authority. Clearly, providers and customers alike need to know, understand, and adhere to technical and engineering standards. Universally applying these standards to all Navy organizations adds strength and credibility to NAVSEA's technical authority role and compliance by all commands. Standards and policies need to be revised to add to this common face for our customers.

Internally, NAVSEA must also engage in a parallel effort. We must find a way to sustain our technical core equities to meet our customers' needs in the future. Our business plans must evaluate the current and future core equities and ensure they are maintained by our actions and planning. Any gaps must be identified and a plan to fill them must be defined.

Based on this, there are a series of needs we must consider, all of which have direct impact on providing integrated product support to the Fleet. These include the following:

- Interdependent and coordinated Fleet support and "in-service" assessments,
- Budget impact (short-term and long-term),
- "Single" NAVSEA face in Fleet concentrations,
- Technical authority and publicized standards creating awareness and compliance,
- Full-Service Contracting,
- "In-Service" systems support needs (short-term and long-term),
- Material condition assessments

and documentation, and
- High-level and functionality assessments.

Meeting these needs is vital to our future. We must look at mechanisms to achieve focused goals in these areas. This will require teamwork and partnerships. NAVSEA family members must share with one another and encourage detailed exchanges of information. Using the best practices, processes and procedures is key.

We must maintain our strong partnerships with Fleet commands and build new ones as needed. That also is true for our customer-partner PEOs who we need to help us develop the best integrated Fleet support effort ever.

As I said earlier, our actions on these initiatives support CNO's priorities, and NAVSEA's strategic goal of effective, timely, affordable integrated product support for the Fleet. The changes we make inside the Corporation must have a positive and visible impact on our Fleet customers!

Knapp

Continued from page 3

Before I close this update, I must mention my trips to the Engineering Duty Officer School to speak to the students completing their formal training for the challenges of the ED profession. I

was universally impressed by the caliber of officer selecting Engineering Duty as a career path. Displaying an outstanding level of knowledge and a superior professional demeanor, these officers are clearly ready to lead the world's most capable and techni-

cally superior Navy into the 21st Century. Good luck to each of them as they embark on an exciting and rewarding journey.

Paige

Continued from page 4

When asked about his thoughts on being a part of a topic in today's headlines, CDR Gannon says that it's because his job deals with future weapons sys-

tems. "I hope to keep doing this for the rest of my career. It's very important work, and it's very challenging," he says.

For information on how you can become a part of this cutting edge team, contact the Director

for TAMD and Systems Engineering (PEO, TSC-T), 1333 Isaac Hull Ave. SE, Washington Navy Yard, DC 20376.

Klemm

Continued from page 5

Since early April, we have been developing the plans for the recovery of crewmembers, conducting an environmental assessment to determine whether any significant impacts to the environment could result and briefing U.S. and Japanese officials on the status and probable outcome. CAPT Bert Marsh (NAVSEA OOC) has the lead on the technical side of the salvage operation. LCDR Gregg Baumann and LCDR Sylvester Mata of NAVSEA OOC and LCDR Steven Stancy, the PACFLT Diving and Salvage Officer, have been working closely with contractors, SMIT-TAK and Crowley Marine, to develop the salvage plan and with various State and Federal Agencies for environmental mitigation planning and approval of the EA plan. A technical feasibility study determined that the recovery could be accomplished, but not without risks such as structural failure of the heavily damaged ship. Raising the ship to the surface was deemed unsafe. The 830-ton vessel would be the

heaviest object the Navy has ever lifted intact from such a depth. A specially equipped heavy-lift ship would lift Ehime Maru, carry it submerged for 13 miles approximately 100 feet above the ocean floor to shallow water approximately 115 feet deep near the coast of Honolulu and set it down where U.S. Navy and Japanese divers from Ship Repair Facility Yokosuka can work effectively. Divers from the Japanese Maritime Self Defense Force EOD organization will also participate. After recovery, including efforts to recover any remaining fuel, oil and accessible HAZMAT, *Ehime Maru* would be lifted and returned to about 6,000 feet of water just outside the 12-mile limit of U.S. territorial waters.

The environmental assessment, including measures added to the recovery plan to minimize any potential environmental impacts, was completed on June 15th. The U.S. Pacific Fleet Commander, Admiral Thomas Fargo has reviewed the assessment and determined that the recovery would have no significant impact on the environment. Although this is a complicated and

challenging undertaking, the decision has been made to proceed with the recovery.

Besides the EDs involved with the recovery operation, I would also like to recognize LT John Szatkowski of Pearl Harbor NSY&IMF. John was the Project Superintendent for the post-collision repairs to the *USS Greeneville*. Although the needed repairs to damaged SHT tiles, non-pressure hull and the rudder were much less extensive than might have been expected given the magnitude of the forces associated with the collision, the real work was in ruling out the repairs that in the end did not need to be done. The Shipyard and NAVSEA headquarters engineering team was able to rule out rudder yoke and bearing damage, allowing the return of a fully capable asset to the Fleet in the shortest possible time.

The professionalism of the Pearl Harbor Naval Shipyard and the PACFLT/SEA OOC Environmental Assessment Team has once again proven that there is good reason why our Community is the go to team. Well done, Folks.



Left: LCDR Steven Stancy, The Pacific Fleet Diving and Salvage Officer, is heavily involved in the coordination of the Navy's recovery of the Japanese Fishing Vessel Ehime Maru. The chart depicts the topography of the ocean bottom along Oahu's southern coast. Right: LT John Szatkowski, Project Superintendent for the post-collision emergent repairs to the USS Greeneville.

MIT*Continued from page 1*

the Navy or the Coast Guard. The course of study consists of a two-year program, which leads to a Master of Science degree in Naval Architecture and Marine Engineering, and a three-year program, which leads to the degree of Naval Engineer.

The April centennial celebrated the 1300 plus graduates of the XIII-A program by honoring the program, its graduates and their contributions to naval ship design. The celebration included a reception on Wednesday evening, 18 April, at the MIT Museum. On Thursday the Anniversary program included talks on Technological Change and the U.S. Navy and a student poster session where students were able to present results of their research. Also on Thursday a panel discussion was held on the future of naval ship design educational opportunities and research. The panel included RADM Jay Cohen (Chief of Naval Research), RADM(S) Paul E. "Sully" Sullivan (VIRGINIA Class Program Manager (PMS 450)), RADM Millard S. Firebaugh USN (Retired) (VP for Innovation and Chief Engineer Electric Boat), Professor Harvey Sapulski (Director of MIT Secu-



Panel discussion. Left to right: RADM(S) Paul Sullivan, PMS 450 (MIT XII-A 1980), Professor Harvey Sapulski, MIT Security Studies Program, RADM Jay Cohen, CNR (Woods Hole), RADM Millard Firebaugh, Electric Boat (MIT XIII-A 1966) and Professor Chrys Chrysostomidis, MIT Ocean Engineering Department Head.

rity Studies Program) and Professor Chrys Chrysostomidis (Head of MIT's Ocean Engineering Department). A gala dinner was held Thursday evening where both President Vest of MIT and ADM Bowman addressed the more than 200 attendees. On Friday the XIII-A students presented the results of their research work in ship design and graduate degree theses.

The theme that both the panel discussion and ADM Bowman hit upon was that the Navy needs officers with a strong technical background and that the XIII-A program is ideally suited to provide just such a basis for our technical community of Engineering Duty Officers now and in the future.



CAPT "Chip" McCord (left), MIT (MIT XIII-1 1981) discusses the day's events with RADM Randy King, USN (Retired) (MIT XIII-A 1946).

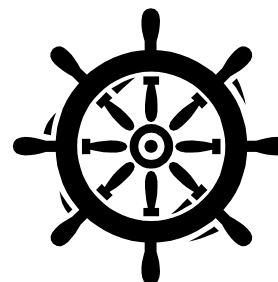
Phased Testing on LPD 17*Continued from page 11*

In June 2001, the SCS successfully completed its factory acceptance and sub-system integration tests utilizing SWAN components and simulated external systems. The SCS met most of its assigned system requirements. Minor problems were identified and corrective action assigned/resolved/re-tested giv-

ing Test Officer, CDR(S) George Sutton, a high level of confidence in the test approach. The system will be proven further during the next phase of testing when it is connected to real ship systems via the nationwide network. The goal is to have the "total ship system" fully tested prior to installation onboard the lead ship.

There are SWAN components at virtually every LPD test

site to accommodate this phased test approach. Early testing continues to show promise and benefits.



DD 21 Program

Continued from page 12

EDs also hold several other DD 21 billets. The Combat Systems Engineer, CDR Reid Davis, manages all Land Attack, Battlespace Dominance, and Command & Control systems. The Air Dominance Officer, CDR Pete Nardi, leads the Navy acquisition of the advanced Multi-Function Radar for both CVN-77 and DD 21, and manages the Air Dominance systems. The Undersea Dominance Officer, CDR (S) Charles Davis, oversees the Anti-Submarine Warfare and Mine Warfare systems aboard DD 21. The Test and Evaluation Officer, LCDR Mary Beth Chipkevich, manages all aspects of the Test & Evaluation Master Plan (TEMP) and the planning

for developmental, operational, and live-fire testing for DD 21. The two Ship Design Officers, LCDR Tom Tomaiko and LCDR Rich Blank, directly support advanced hull design, propulsion systems, auxiliary systems, damage control, and survivability. The C3ISR Officer, LCDR Ivan Pierce, oversees all of the communications, intelligence, surveillance, reconnaissance, and interoperability for DD 21.

Every officer addresses DD 21 ship system design from their specific area, but they also focus on the total ship system context. They must address reduced manning requirements and technologies, reduced ship signatures, advanced survivability, interoperability, modeling and simulation, and full service con-

tracting for the life cycle support of the DD 21. Their responsibilities include tracking the competition between the two Industry Teams, facilitating the transition to a single DD 21 Full Service Contractor, and leading the integrated government-industry team through design, construction, delivery, and life cycle support of the DD 21 ship class.

EDs in the DD 21 Program Office have very unique and exciting opportunities to help build the U.S. Navy's 21st Century Surface Combatant, the USS ZUMWALT.

Additional information on the DD 21 Program and the PEO Surface Strike can be found at <http://dd21.crane.navy.mil> and <http://www.peos.crane.navy.mil>.

Solving Problems!

Continued from page 13

Amphibious Ship Integration – a continuous process necessary to improve capabilities to gain a warfighting edge. Ongoing efforts include MV-22, AAV, CH60, JSF, VTUAV, MTRV and Organic Airborne Mine Warfare Systems. Most of the work required to integrate the new systems with the existing ship systems is done by Shipalt during CNO Availabilities.

Amphibious Ship Stability Im-

provement – The continual installation of new weapon systems, HM&E and C4I systems on our amphibious ships requires constant monitoring and engineering improvements to maintain ship class stability – both a technical and programmatic challenge, particularly for the LHA class.

The goal of PMS 470 is to provide a Fleet first-focus, by fully integrating a coordinated approach to maintenance and modernization with the goal of improving the overall support for

all Expeditionary Warfare ships. If you envision yourself working in a program office supporting a robust waterfront presence with an integrated planning effort centered around an e-business culture, then PMS 470 is the place to be. If you have any questions regarding PMS 470 please feel free to call me at 202-781-0938, or CAPT(SEL) Paul Cruz at 202-781-0519, CDR Larry Haukenes at 202-781-3664, and CDR John Day at 202-781-0531.

It All Starts Here!

Continued from page 16

Don is responsible for Navy participation in the design review process for all development efforts. He is also heavily involved in our test planning process and key watchstander and console operator during test

events.

The systems being developed at CSEDS are critical to our ability to give our Sailors the weapon system they need to defend themselves against the challenging threats of the future. Marty, Don and I are proud to be able to represent the Engineering

Duty Officer community here in Moorestown, and to be part of the team that is meeting those challenges. We want to extend an open invitation to anyone whose travels take them to the area to please stop by for a visit and tour."

Where The Fleet Begins

Continued from page 14

"Overseeing the Navy's principal test and evaluation center and in-service engineering agency for all hull, mechanical and electrical ship systems and equipment aboard surface combatants, aircraft carriers and submarines is a very challenging and exciting job", says CAPT Joseph. SSES is the life cycle engineering agent for most of those systems, and the Navy's machinery research, development, test and evaluation command. The Engineering Duty (ED) officers assigned in partnership with civilian engineers constantly face the challenge of keeping older systems and equipment working at design levels. At the same time, the EDs and civilians enjoy the excitement of working on state-of-the-art systems and equipment still in the testing stage, such as the DD21 integrated propulsion system (IPS), integrated control system, fiber optic component testing and SMARTSHIP. CAPT Joseph further states, "There is also the R&D challenge of working on future equipment and systems such as power electronic building blocks (PEBB), fuel cells, superconducting motors and machinery silencing programs."

There are currently four EDs including LCDR David Swank at Philadelphia. LCDR Swank says that the challenge of working on so many diverse systems and the challenge of improving them is what made his tour memorable. "Knowing that you have helped make Navy ships more reliable while also making HM&E equipment systems easier for the

sailor to operate is very satisfying to me," acknowledges LCDR Swank.

Cutting-edge R&D occurs at several of the Division's remote site across the country including the Acoustic Research Detachment (ARD) in Bayview, Idaho. The Navy's large-scale vehicles operate in the confines of Lake Pend Oreille under the direction of CDR Dave Fox, ARD Officer in Charge.

CDR Fox notes, "Large scale static and dynamic submarine models, including the autonomous powered vehicles Kokanee and Cutthroat, represent significant contributions to the R&D process in understanding the physical phenomena and demonstrating performance prior to full scale implementation. Our fleet of models with high structural fidelity, literally thousands of sensors and modern processing capabilities are a major factor in advancing the research knowledge and creating affordable performance for US submarines." As the officer-in-charge, his is the only military position at ARD. CDR Fox says, "As such, I have a unique opportunity to gain military experience in many leadership challenges facing senior EDs. I work with Navy civilian and contractor engineers, scientists, technicians and mechanics. I also oversee a small facility with regular interaction with local and national politicians, including the town Chamber of Commerce, area elementary school, the Governor and U.S. Senators."

EDs could engage in any of NSWCD's core technical capabilities which fall into three general areas namely, marine technology, design and integration

and naval systems. Marine technologies consist of propulsion machinery; auxiliary machinery; electrical machinery; hull and deck machinery; habitability and hull outfitting; ship materials and processing technology; surface and undersea vehicle structures; analytical and experimental hydrodynamics; environmental quality science and systems and logistics.

Design and integration capabilities include vehicle designs and integrated systems; combatant craft (manned and unmanned); USMC vehicle systems and components; shipbuilding and manufacturing technology; and cost benefit analysis, simulation and modeling.

The naval systems technical capabilities are comprised of vehicle vulnerability and survivability systems; active and passive acoustic signatures and silencing systems; non-acoustic signatures; undersea sail and deployed systems and weapons materials including electrochemical power sources R&D.

CAPT Petri exclaims, "If you work at the Carderock Division, you will discover unique challenges as well a legacy of inquiry and innovation that has its roots in our esteemed founders, RADM George W. Melville and RADM David W. Taylor". In fact, annually Carderock Division is among the Navy's leading organizations for patents issued. Patents represent the products of a culture that focuses on innovating and developing new concepts of vital importance. "Our business is knowledge", concludes CAPT Petri.

ENGINEERING DUTY OFFICER SCHOOL**2001B-2 Basic Course/2001R-2 Reserve Course****2 Apr - 11 May 01/ 2 Apr -13 Apr 01**

First Row: CDR Bob Vince (Staff), LT Mike Richman, LT Jonathan Jett-Parmer, LCDR Dave Hunt, LCDR Dan Busch, LCDR Jess Arrington, LT Jason Lloyd, LT Ryan Norris, CAPT John Exell (Commanding Officer). Second Row: LCDR Marvin Campbell (Staff), LT Craig Wilgenbusch, LT Dan Lannamann, LT Ron Moon, LT Derek Scott, LT Ron Cherry, LCDR George Incheck, Dr. Mary Davidson (Staff). Third Row: LCDR Kurt Crake (Course Director), LT Karl Eimers, LCDR Chris Severns, LT Chris Hanson, LT Trent Gooding, LCDR Scott Crawford

ENGINEERING DUTY OFFICER SCHOOL**Senior Course 2001S-2****4-15 June 2001**

First Row: CDR Bob Vince (Senior Course Director), CDR John Lawson, CDR (S) Cleon Walden, CDR Scott Carlson, RADM Anthony Lengerich, CDR Dave Klein, CDR Dave Fergus, CDR Athena Christodoulou, CAPT John Exell, (Commanding Officer) Second Row: LCDR Kurt Crake (Staff), CDR Larry Whatley, CDR (S) Daniel Seigenthaler, CDR Dave Fox, CDR Chuck Baker, CDR Andre Maraoui, CDR Joe Payne, CDR (S) Bill Kiestler, CDR Kent Kettel, CDR Jeff Winkeljohn Third Row: CDR Art Billingsley, CDR Bob Parker, CDR (S) Jeff Hailey, CDR Paul Skogerboe, CDR (S) Steve Reimers, CDR Randy Eldred, CDR Gary May, CDR (S) Dennis Gannon

CHANGES OF COMMAND

| DATE | COMMAND | OUTGOING | INCOMING |
|-------------|--------------------------|--------------------------|----------------------------|
| 23 APR 2001 | OIC NAWCWD WHITE SANDS | CAPT M. J. GREEN | CDR B. P. MURPHY |
| 25 APR 2001 | SPAWARSSCOM (PMW 157) | CAPT M. T. GEHL | CAPT W. D. RODRIQUEZ |
| 04 MAY 2001 | CO NSWC CSS PANAMA CITY | CAPT H. D. COVERT | CAPT A. A. SHUTT |
| 14 MAY 2001 | COMDR PH NAVSHIPYD & IMF | CAPT J. D. CONNERS | CAPT J. A. EDWARDS |
| 15 MAY 2001 | SUPSHIP PUGET SOUND | CAPT G. B. SANFORD | CAPT P. E. THROWER-LESESNE |
| 20 MAY 2001 | OIC FTSCLANT DET MAYPORT | LCDR C. R. SIKES, JR. | LCDR S. F. WILLIAMSON |
| 25 MAY 2001 | COMSPAWARWYSCOM | RADM J. A. GAUSS | RADM K. D. SLAGHT |
| 08 JUN 2001 | CO SHIPREPFAC YOKOSUKA | CAPT D. T. ARMSTRONG, JR | CAPT D. W. BELLA |
| 22 JUN 2001 | PEO EXW (PMS 317) | CAPT W. H. LUEBKE | CAPT S. J. STACKLEY |
| 22 JUN 2001 | PEO (S) (PMS 500) | CAPT C. T. BUSH | CAPT C. H. GODDARD |
| 29 JUN 2001 | CO SWFPAC SILVERDALE | CAPT B. A. GUSTIN, III | CAPT K. O. LYLES |

*CHANGE OF DUTY*

| RANK | NAME | TO | REPORT DATE |
|---------|----------------------|-----------------------------|-------------|
| CAPT | BURNA, RICHARD F. | SUPSHIP PORTSMOUTH | MAY 2001 |
| CAPT | FALLONE, JOSEPH M. | NAVSEA (SEA 00B) | JUN 2001 |
| CAPT(S) | LEWIS, DAVID H. | PEO TSC (PMS 400D) | JUN 2001 |
| CAPT | LIENARD, DAVID E. | NAVSEA (SEA 05U) | JUN 2001 |
| CAPT | MALUSH, RUDOLPH E. | PINSUR SEA DUTY DET NORFOLK | MAY 2001 |
| CAPT | RAHALL, RONALD G. | COMNAVAIRLANT | JUN 2001 |
| CAPT | SANFORD, GEORGE B. | PRES INSURV NORFOLK | JUN 2001 |
| CDR | AMY, JOHN V., JR. | NROTCU MIT CAMBRIDGE | JUN 2001 |
| CDR(S) | BRACCO, MARK D. | COMREGSUPPGRU NORFOLK | APR 2001 |
| CDR | COLEMAN, WILLIAM F. | LPD 17 DET AVONDALE | JUN 2001 |
| CDR | DOERRY, NORBERT H. | NAVSEA (PMS 377RB) | APR 2001 |
| CDR | HARRIS, ARTHUR C. | PEO TSC (PM 400B) | JUN 2001 |
| CDR(S) | DUNLAP, JEFFREY R. | PEO (W) (PMA 281) | JUN 2001 |
| CDR | HOLSTEN, GUY V. | OPNAV (N433C) | MAY 2001 |
| CDR(S) | KIESTLER, WILLIAM C. | CINCPACFLT PEARL HARBOR | MAY 2001 |
| CDR | MARAOUI, ANDRE | PEO EXW (PMS 325J1) | APR 2001 |

CHANGE OF DUTY

| RANK | NAME | TO | REPORT DATE |
|-------------|---------------------------|------------------------------|--------------------|
| CDR(S) | MEYER, CHRIS D. | NAVSEA (PMS 378) | APR 2001 |
| CDR | SPOONER, SCOTT G. | PEO TSC (PMS 400D3) | MAY 2001 |
| LCDR | ARRINGTON, JESS W. | NORFOLK NAVSHIPYD | MAY 2001 |
| LCDR | BUSCH, DANNY K. | SSFA CHANTILLY | MAY 2001 |
| LCDR | CROWE, ROBERT A. | STU NAVPGSCOL MONTEREY | JUN 2001 |
| LCDR | CUELLAR, ALVARO F. | COMNAVAIRPAC NORTH ISLAND | APR 2001 |
| LCDR | HUNT, DAVID S. | PEARL HARBOR NAVSHIPYD & IMF | MAY 2001 |
| LCDR | JOHNSON, ERIK O. | NSWCD CORONA | JUN 2001 |
| LCDR | KALOWSKY, JAMES K. | NORFOLK NAVSHIPYD | APR 2001 |
| LCDR | KNOLL, WILLIAM S. | DIRDIVOFNREACDOE | JUN 2001 |
| LCDR | MAYFIELD, TODD A. | STU SWOSCOLCOM NEPORT | APR 2001 |
| LCDR | PAYNE, JOHN C., JR. | STU SWOSCOLCOM NEWPORT | JUN 2001 |
| LCDR | POLLOCK, KENNETH R. | MIL APPLICATION GERMANTOWN | MAY 2001 |
| LCDR | SAYWARD, ELTON G., JR. | USS TARAWA (LHA 1) | JUN 2001 |
| LCDR | SMALL, DOUGLAS W. | USS IWO JIMA (LHD 7) | APR 2001 |
| LCDR | STEIN, JAMES E. | COMNAVSURFPAC CORONADO | JUN 2001 |
| LCDR | TEMME, MICHAEL W. | STU PG MIT CAMBRIDGE | MAY 2001 |
| LCDR | THORNELL, MARK E. | STU NAVPGSCOL MONTEREY | JUN 2001 |
| LCDR | VEJVODA, CURTIS E. | USMTM JUBAIL SA | JUN 2001 |
| LCDR | WAGNON, DAVID L. | PRESINSURV S/D NORFOLK | JUN 2001 |
| LCDR(S) | WHITE, SHAWN E. | PEARL HARBOR NAVSHIPYD & IMF | JUN 2001 |
| LCDR | WOLKERSTORFER, WILLIAM J. | CINCPACFLT PEARL HARBOR | JUN 2001 |
| LT | ALBANUS, JEFFREY G. | DIRDIVOFNREACDOE | JUN 2001 |
| LT | BLAIR, STUART R. | STU PG MIT CAMBRIDGE | MAY 2001 |
| LT | CROLEY, PATRICK A. | STU PG MONTEREY | JUN 2001 |
| LT | EIMERS, KARL P. | SPAWARSYSCEN CHARLESTON | JUN 2001 |
| LT | GISH, LYNN A. | STU PG MIT CAMBRIDGE | MAY 2001 |
| LT | GOODING, TRENT R. | PUGET SOUND NAVSHIPYD | MAY 2001 |
| LT | HANSON, CHRISTOPHER J. | SUPSHIP GROTON | MAY 2001 |
| LT | HARDMAN, WILLIAM L. | STU PG MIT CAMBRIDGE | MAY 2001 |
| LT | JONES, BERNARD L. | STU PG MONTEREY | JUN 2001 |
| LT | LLOYD, JASON M. | NORFOLK NAVSHIPYD | JUN 2001 |
| LT | MOON, RONNIE L. | SUPSHIP NEWPORT NEWS | MAY 2001 |
| LT | NORRIS, RYAN B. | SUPSHIP SAN DIEGO | MAY 2001 |

CHANGE OF DUTY

| RANK | NAME | TO | REPORT DATE |
|-------------|----------------------|------------------------|--------------------|
| LT | RAMSEY, JACK S., JR. | STU PG MIT CAMBRIDGE | MAY 2001 |
| LT | SCOTT, ROBERT D. | PORTSMOUTH NAVSHIPYD | JUN 2001 |
| LT | SEXTON, NEIL G. | STU NDIVESALVTRCEN | JUN 2001 |
| LT | TOUSE, ELIZABETH J. | STU PG MONTEREY | JUN 2001 |
| LT | TOUSE, MICHAEL P. | STU PG MONTEREY | MAY 2001 |
| LT | WARNOCK, DWIGHT S. | STU PG MONTEREY | JUN 2001 |
| LT | ZACHARY, URIAH E. | COMNAVSURFPAC CORONADO | APR 2001 |
| LTJG | CRYER, MATTHEW A. | STU PG MONTEREY | JUN 2001 |
| LTJG | HIGGINS, JULIE A. | STU PG MIT CAMBRIDGE | MAY 2001 |
| LTJG | ROACH, MICHAEL L. | STU PG MIT CAMBRIDGE | MAY 2001 |
| LTJG | ROLLINGS, SARAH E. | STU PG MONTEREY | JUN 2001 |
| LTJG | SYLVESTER, CRAIG A. | STU PG MONTEREY | JUN 2001 |

EDQP COMPLETIONS

| | |
|-------------------------------|--------------------------------|
| - LCDR Anderson, Thomas J. | SUPSHIP BATH |
| - LCDR Amrozowicz, Michael D. | SUPSHIP NEWPORT NEWS |
| - LCDR Bowman, Mark D. | SUPSHIP NEWPORT NEWS |
| - LCDR Florence, Dennis E. | NORFOLK NAVSHIPYD |
| - LCDR Herbert, Paul A. | PEARL HARBOR NAVSHIPYD AND IMF |
| - LCDR Gill, Patricia A. | SPAWARSSYSCOM San Diego |
| - LCDR Jordan, Pernell A. | SUPSHIP Jacksonville |
| - LCDR Le Goff, Didier A. | SPAWARSSYSCOM San Diego |
| - LCDR Mayfield, Todd A. | SUPSHIP New Orleans |
| - LCDR Payne, John C., Jr. | SPAWARSSYSCEN Charleston |
| - LCDR Reason, Joseph P., Jr. | SUPSHIP Groton |
| - LCDR Vaidyanathan, Rajan | NAVPMOSSP Sunnyvale |
| - LT Danko, Dale J. | Puget Sound NAVSHIPYD |
| - LT Leary, Mark A. | Pearl Harbor NAVSHIPYD & IMF |
| - LT Mason, Christopher R. | Pearl Harbor NAVSHIPYD & IMF |
| - LT Masten, Adam W. | Portsmouth NAVSHIPYD |
| - LT McKerrow, Gary R. | Dahlgren Division NAVSUFWARCEN |
| - LT Tuite, Joseph M. | Pearl Harbor NAVSHIPYD & IMF |
| - LT White, Shawn E. | RESUPSHIP Ingleside |
| - LT Zachary, Uriah E. | SPAWARSSYSCEN San Diego |

Fair winds and following seas.

CAPTAINS

| | | |
|----------------------|------------------------|-------------|
| MANVEL, JOHN T., JR. | PEO CARRIERS (PMS 378) | 01 APR 2001 |
|----------------------|------------------------|-------------|

COMMANDERS

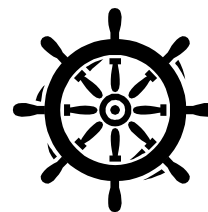
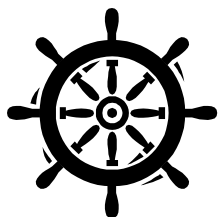
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|-----------------------|----------------------------|-------------|
| CLOSS, JOSEPH V. | DAU FORT BELVIOR | 01 APR 2001 |
| KNIGHT, ROBBIE L. | OIC SPAWARCEN DET NORFOLK | 01 MAY 2001 |
| COLE, THOMAS V. | SPAWAR (USMCC41) QUANTICO | 01 JUN 2001 |
| GALLET, MICHAEL J. | PEO TSC (PMS 465A1) | 01 JUN 2001 |
| KNIGHT, DANIEL L. | USS KITTY HAWK (CV 63) | 01 JUN 2001 |
| MATZ, DANIEL R. | NAVSEA (SEA 08) | 01 JUN 2001 |
| RINGLEIN, MARK J. | SSP WASHINGTON | 01 JUN 2001 |
| ROZWOD, WILLIAM J. | SSFA MILSATCOM LOS ANGELES | 01 JUN 2001 |
| STAMMETTI, VINCENT A. | PEO TSC PMS (400B3) | 01 JUN 2001 |

LIEUTENANT COMMANDERS

| | | |
|-------------------|---------------------------|-------------|
| REBER, KENNETH L. | NTF BMDO COLORADO SPRINGS | 31 MAY 2001 |
| PERRY, GEORGE D. | COMNAVAIRPAC NORTH ISLAND | 01 JUN 2001 |

LIEUTENANT

| | | |
|----------------|-----------------|-------------|
| MOORE, ALAN G. | NSWCD CARDEROCK | 31 MAY 2001 |
|----------------|-----------------|-------------|



ED NEWSLETTER



| | |
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ENGINEERING DUTY OFFICERS



MISSION

Apply practical engineering experience, technical knowledge and program management expertise to integrate science, technology and design into affordable ships and ship systems.

VISION

We are the Technical Leaders of the Navy, for Ships and Integrated Warfare Systems.